Unit 9: Numbers to 50

Counting to 50 (1)

➜ pages 52–54

1. There are 27 bricks.

2. Missing numbers from left to right as follows:
a) 23, 24, 25
b) 49, 46, 44
c) 19, 20, 22, 23
d) 37, 40, 41
e) seventeen, twenty

3. Missing numbers from left to right as follows:

17, 19, 20

41, 42, 44

4. Children could have explained the mistake in different ways, e.g.

The number after 39 should be 40.

You cannot write 10 in the ones column, or 30 in the tens column. 10 ones should be regrouped into 1 ten and put with the 3 tens to make 4 tens. This is written as 40 or forty.

5. Children should have drawn in another 5 circles.

Reflect

Children should have chosen one of the numbers and counted up to 50 and back down to 0.

The most challenging sections of the count are likely to be counting from 10 to 20 and counting over tens boundaries.

Some children may demonstrate confusion between 'teen' and 'ty' numbers.

Children are likely to find counting backwards more challenging than counting forwards as they will probably have had less experience in doing so.

Counting to 50 (2)

➜ pages 55–57

1. a) 45, 44, 43 (in any order)
b) 35

2. The missing numbers are: 33, 34, 35, 36.

3. The missing numbers are: 12, 13, 14 and 34, 35, 36, 37, 38, 39.

4. a) The dark counter is on 28 and the light counter is on 37.
b) The dark counter needs to move 9 spaces to catch the light counter.

5. Children should have drawn a route round the left hand side of the map. Children could have explained how they found the route in different ways, e.g.

I saw the number at the start was 48 so I counted backwards from 48 to find the right way to go.

I tried different routes and then checked the count each time to see if it was right.

Reflect

Children should have said the following counts out loud:

19, 20, 21, 22, 23, 24, 25, 26, 27, 28

43, 42, 41, 40, 39, 38, 37, 36, 35, 34, 33, 32

Tens and ones

➜ pages 58–60

1. a) 29
b) 40

2. a) 4 tens 7 ones. The number is 47.
b) 3 tens 0 ones. The number is 30.

3. Children should have drawn counters into the ten frames as follows:
a) 2 full ten frames and 9 counters in the third frame.
b) 2 full ten frames and 4 counters in the third frame.

4. Children should have completed the table as follows:

2nd row: 4 tens and 6 ones, 46

3rd row: 3 tens and 2 ones (drawn), 32

4th row: 4 tens (drawn), 4 tens and 0 ones (written)

5. a) Children should have drawn 7 cubes.
b) 47

Reflect

Children could have chosen any number and changed the number of tens in any way. They should have noticed that, when you change the number of tens, the tens digit changes but the ones digit remains the same.

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Representing numbers to 50

➜ pages 61–63

1. Children should have matched pictures to diagrams as follows:

Top picture (24 in ten frames) ➜ second part-whole diagram (24)

Second picture (42 in tens and ones blocks) ➜ bottom part-whole diagram (42)

Third picture (14 on a bead string) ➜ top part-whole diagram (14)

Bottom picture (43 in tens and ones blocks) ➜ third part-whole diagram (43)

2. Children should have completed the part-whole diagrams as follows:
a) Left-hand diagram: 29 (whole)
right-hand diagram: 29 (whole), 9 (part)
b) Left-hand diagram: 33 (whole), 3 tens and 3 ones (parts)
right-hand diagram: 33 (whole), 30 and 3 (parts)

3. Children should have drawn 10 counters in each of the first two ten frames and then 2 counters in the remaining ten frame.

4. a) 47 (whole)
b) 30 (part)

5. Rick is not correct. Children could have explained how they knew in different ways, e.g.

46 is made up of 4 tens and 6 ones. Rick has written 4, which is not the same as 4 tens. He needs to write 4 tens and 6 ones or 40 and 6.

4 and 6 added together do not make 46.

Reflect

There are 12 possible answers: 12, 13, 14, 23, 24, 34, 21, 31, 41, 32, 42, 43. Children should have written their chosen number in a part-whole diagram, e.g.

12 (whole), 10 and 2 (parts) or 1 ten and 2 ones (parts)

34 (whole), 30 and 4 (parts) or 3 tens and 4 ones (parts)

42 (whole), 40 and 2 (parts) or 4 tens and 2 ones (parts)

Comparing numbers of objects

➜ pages 64–66

1. a) Children should have circled the top child.
b) Children should have circled the top hen.

2. Children should have drawn at least 6 counters into the right-hand ten frame.

3. a) >
b) <
c) <

4. a) Children should have circled the right-hand child.
b) Children should have circled the right-hand child.

5. Children should have added more counters on the left-hand diagram than on the right-hand diagram, e.g. 33 > 32, 38 > 35, 40 > 39

Reflect

Children's answers will vary depending on the number of counters picked. Children might have checked who took more in different ways, e.g.

They could have counted the number of counters in each set and compared these two numbers to see which is greater.

They could have organised the counters in each set into tens and ones to compare them.

They could have placed the objects in each set in a line, lining objects up underneath each other to compare them.

Comparing numbers

➜ pages 67–69

1. a) Mo has more points.
b) 24 > 19 (or 19 < 24).

2. Children should have circled:
a) 39, 21
b) 12, 38

3. a) <
b) <
c) =

4. There are four possible answers: 31, 34, 41 and 43.

5. Children should have circled the following numbers:
a) 24, 16, 37, 18
b) 4, 14, 23

6. Any number from 1 to 23, excluding 17, 18 and 20.

Reflect

The number could be 23, 24, 25, 26 and 27.

Children should have been able to recognise and explain whether their number is greater or smaller than another given number, using appropriate vocabulary. They should also be able to use clues to identify their partner's number.

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Ordering objects and numbers

➜ pages 70–72

1. a) 22, 25
b) 25 > 22. Suki has more sweets.
c) Suki has the most sweets.
Mo has the fewest sweets.

2. Children should have drawn lines to the correct numbers on the number line:
a) 32, 28, 35
b) 28, 32, 35

3. 23, 25, 32

4. 27, 24, 19, 17

5. Children should have circled 39 or 40.

6. a) Star and triangle can be any pair of numbers between 20 and 26 such that star > triangle, e.g.

star = 22 and triangle = 21, star = 25 and triangle = 21, star = 24 and triangle = 22.

b) Children should have disagreed with Jo. The two numbers chosen satisfy the first two number sentences but not the third one. Children could have explained their reasoning in different ways, e.g.

The star must be greater than the triangle but 19 is smaller than 30, so Jo is not correct.
19 < 26 and 30 > 20 but 19 is not greater than 30.

Reflect

Children could have put any number between 29 and 36 into the number sentence as the number must be both greater than 29 and smaller than 36. Using whole numbers only, this gives 6 possible answers: 30, 31, 32, 33, 34 and 35.

Counting in 2s

➜ pages 73–75

1. There are 16 wheels.

2. Children should have drawn counters in the ten frames for the following numbers: 8 and 10.

3. a) 20
b) 7

4. Missing numbers from left to right as follows:
a) 6, 8
b) 14, 12, 10, 8
c) 26, 20, 18
d) 24, 26, 28, 32, 34, 36, 38 or 36, 34, 32, 28, 26, 24, 22

5. a) 12
22
b) No

Reflect

Counting up in 2s from 20 to 50 and then down in 2s to 0 should have helped children notice the pattern in the ones digits, i.e. that the count ends in 0, 2, 4, 6, 8, 0, 2… when counting on and 0, 8, 6, 4, 2, 0, 8… when counting back.

This should have helped them to identify that, if they say a number that ends in 1, 3, 5, 7 or 9 (an odd number), then they have made a mistake.

Counting in 5s

➜ pages 76–78

1. There are 30 dots in total.

2. There are 25 apples in total.

3. a) There are 40 bananas in total.
b) There are 45 bananas in 9 bunches.

4. Missing numbers from left to right as follows:

Top row: 3, 6

Bottom row: 10, 25

5. Missing numbers from left to right as follows:
a) 0, 15, 20, 25
b) 15, 10, 5
c) 25, 30, 40, 45
d) 15, 20, 30, 35, 40, 45 and 35, 30, 20, 15, 10, 5

6. No. Children could have explained their answer in different ways, e.g.

When you count in 5s from 15, every answer ends in 5 or 0 so Ali will not say 32.

Ali will count 20, 25, 30, 35… The count misses out the number 32.

Reflect

Children may practise counting in 5s to say how many fingers the others are holding up altogether. Where children guess how many fingers the others are holding up, their growing understanding of the pattern in the end digits when you count in 5s from 0 should be evident in their guess i.e. they should guess a number that ends in 5 or 0.

Some children may start to use what other children in the group have said to inform their guess, e.g. Tyler said 20 and I am showing the same number of fingers as Tyler, so I am going to guess 20 too.

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Solving word problems – addition and subtraction (1)

➜ pages 79–81

1. Children should have drawn 5 counters and 7 counters into the ten frames and written: 5 + 7 = 12 or 7 + 5 = 12.

2. a) 5 + 9 = 14
b) 19 – 8 = 11

3. a) 9 + 6 = 15 and 6 + 9 = 15
b) 7 + 8 = 15 and 8 + 7 = 15

4. a) 7 + 6 = 13 or 6 + 7 = 13
b) 19 – 13 = 6

5. 11 – 5 = 6. Astrid is correct. Children could have explained their reasoning in different ways, e.g.

11 – 5 = 6 and 5 + 6 = 11 are facts in the same number family and so you can use one fact to help you answer the other.

To find 11 – 5 you need to find the difference between 5 and 11. The number fact 5 + 6 = 11 tells you that the difference between 5 and 11 is 6 because this is the number you would have to add on to 5 to get 11. This means the answer to 11 – 5 is 6.

Reflect

Children could have made up different addition and subtraction sentences from this context, e.g.

Addition:

How many cookies do they have in total?

Aman gives Ivy 2 of his cookies. How many cookies does Ivy have now?

Subtraction:

How many fewer cookies does Ivy have?

Aman gives Ivy 2 of his cookies. How many cookies does Aman have now?

Solving word problems – addition and subtraction (2)

➜ pages 82–84

1. a) 11 – 4 = 7
b) 8 + 11 = 19 or 11 + 8 = 19
c) 7 + 8 = 15 or 8 + 7 = 15

2. a) 8 – 4 = 4
b) 17 – 12 = 5
c) This shows the total number of sheep.
d) 15 – 5 = 10

3. Children could have drawn any picture that could represent the number sentence 7 + 7, e.g.

Two sets of objects, each containing 7 objects

A set of 7 objects with 7 more added

A diagram showing 7 + 7, such as a part-whole diagram with 7 and 7 (parts) and 14 (whole)

Reflect

Children could have written many different questions from this context, e.g.

There are 7 sheep in the barn and 5 in the field. How many is that in total?

There are 18 sheep in the field. 6 go into the barn. How many stay in the field?

End of unit check

➜ pages 85–86

My journal

32 shown clearly (e.g. using Base 10 equipment, place value counters, ten frames, part-whole model)

Some might draw 32 objects in no particular order.

Inequality completed using a number less than and a number greater than 32, e.g.

29 < 32 < 35

3 tens, 2 ones

Power play

Any number from 21 to 49 shown in tens and ones, e.g. using Base 10 equipment, ten frames, bead strings. Some children may also make 20 or 50, though these are not strictly in the range.

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